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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,414	11/28/2003	Matthias Schmitt	239217US0	7404

22850 7590 06/07/2007

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EXAMINER	
TSOY, ELENA	

ART UNIT	PAPER NUMBER
1762	

NOTIFICATION DATE	DELIVERY MODE
06/07/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/722,414	SCHMITT ET AL.	
	Examiner	Art Unit	
	Elena Tsoy	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 April 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) *18 and 23-25* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17 and 19-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *2/04, 3/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Election/Restrictions

1. Applicant's election with traverse of Group I, species (ii) in the reply filed on April 18, 2007 is acknowledged. The traversal is on the ground(s) that:

(i) the Examiner has failed to show that the product can be made by another process because batch verses continuous process is not considered to be an act of invention unless unexpected properties are produced, so that the Examiner's allegation that the products of the claimed invention can be made by another method such as a batch process is not persuasive. The Examiner disagrees with this argument. Batch process is another and materially different from a continuous process. It is irrelevant whether it is act of invention or not. If is true why Applicant claims continuous process?

(ii) there is a commonality that exists between the groups (I-IV). It is a technical relationship that involves the same feature, and it is this technical feature that defines the contributions which each of the groups taken as a whole make over the prior art. Restriction is only proper if the claims of the restricted groups are either independent or patentably distinct and there would be a serious burden placed on the Examiner if restriction is not required (M.P.E.P. § 803). The Office has not shown that a burden exists in searching all of the claims. This is not found persuasive because: (a) a technical relationship that involves the same feature is relevant only in "*lack of unity*" restrictions of national stage cases. Applicant, therefore, has not shown why restricted groups are not independent or patentably distinct; (b) the Office has shown that a burden exists in searching all of the claims because they relate to independent or patentably distinct inventions.

The requirement is still deemed proper and is therefore made FINAL.

Claims 1-25 are pending in the application. Claims 18, and 23-25 are withdrawn from consideration as directed to a non-elected invention.

Claim Objections

2. Claim 2 and 15 are objected to because of the following informalities:

Claim 2, lines 1-2, "the aqueous filler mixture is fed into the reactor system one or more fractions" should be changed to "the aqueous filler mixture is fed into the reactor system as one or more fractions".

Claim 15, lines 3, 5, "zinc oxide .... ZnO" should be changed to either to "zinc oxide" or "ZnO" because they constitute the same compound.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 13 recites a limitation "in a proportion of from 20 to 99.9%", which renders the claim indefinite because it is not clear in proportion to what substance it is calculated; and it is also not clear whether percent is calculated based on weight or volume. For examining purposes the limitation was interpreted according to the specification (page 6, line 26) as "in a proportion of from 20 to 99.9% by weight based on rubber granules".

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-17, 19-22 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 5, 7, 10, 11, 13, 17 of U.S. Patent No. 6,8787,59. Although the conflicting claims are not identical, they are not patentably distinct from each other because they relate to the same subject matter except for the process being continuous and being carried out in a series of reactors. However, as it is well settled, continuous process verses batch is not considered to be an act of invention. The use a series of reactors would be obvious for the reasons discussed below in paragraph 9.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1-17, 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smigerski et al (US 6,348,522).

Smigerski et al disclose a *continuous* process (See column 2, lines 1-2) for the preparation of finely divided, filler-containing rubber powders by precipitation in a tube (claimed reactor) by continuously and simultaneously feeding *aqueous* mixtures which contain finely divided filler(s) optionally modified with organosilicon compounds, (carbon black and/or silicate filler), and a rubber latex or an aqueous emulsion of a rubber solution to coagulate rubber on the surface of the filler and form a precipitation suspension of filled rubber granules (See Figs. 1, 3; column 5, lines 64-67), wherein coagulation is effected by lowering the pH and adding water-soluble salts of a metal of Groups IIa, IIb, IIIa and VIII of the Periodic Table of Elements, and continuously discharging the resultant precipitation suspension from the reactor system (See column 4, lines 25-67). The precipitated rubber particles are coated with a coating composition comprising a filler for rubber or the filler which was already mixed with the rubber material at the start of the process or another filler (See column 6, lines 17-25).

Smigerski et al fail to teach that two or more reactors in series (a reactor system) are used (Claim 1). Obviously, if different types of filler-containing rubber powders or a doubled amount of rubber powder should be produced, a series of two or more reactors in series (a reactor system) would be used; each reactor for each type of filler-containing rubber powder.

It is held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced. See MPEP 2144.04. Therefore, it would have been obvious to one

of ordinary skill in the art at the time the invention was made to have provided two or more reactors in series (a reactor system) in Smigerski et al with the expectation of providing the desired at least two types of filler-containing rubber powders or a doubled amount of rubber powder depending on particular customer request.

As to claim 2, an aqueous filler mixture may be fed into a reactor system as two fractions (See column 4, lines 36-54).

As to claims 3-5, obviously, a filler mixture would be fed to each reactor in a reactor system.

As to claims 6-7, obviously thickness of coagulated rubber and a thickness of coating on the coagulated rubber particles would depend on residence time. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have determined the optimum values of the relevant residence time parameters (including those of claimed invention) in each reactor of a reactor system through routine experimentation in the absence of showing of criticality. It is well settled that it is not inventive to discover the optimum or workable ranges of result-effective variables by routine experimentation. In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). See also In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

As to claims 8-10, pH may be adjusted in the range of 5-7.5 (See column 4, lines 50-61). The size of the coagulated or filler-containing rubber particles can be controlled by the pH adjustment (See column 9, lines 48-51). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have controlled pH in each reactor in *any* mode in Smigerski et al including sequential decrease based on the pH in a first reactor

with the expectation of providing the desired size of the coagulated or filler-containing rubber particles in each reactor depending on particular use of a final product.

As to claims 11-12, the precipitation process is carried out at 20-80^{0}C (See column 5, lines 1-3). Overlapping ranges are *prima facie* evidence of obviousness. It would have been obvious to one having ordinary skill in the art to have selected the portion of Smigerski et al's range that corresponds to the claimed range. *In re Malagari*, 184 USPQ 549 (CCPA 1974).

As to claim 13, fillers are in general the carbon blacks and white fillers of a synthetic nature, such as e. g. precipitated silicas, or naturally occurring fillers, such as e. g. siliceous chalk, clays etc., known from rubber processing (See column 2, lines 55-59).

As to claim 14, rubber includes natural rubber, emulsion SBR with a styrene content of 10 to 50%, butyl-acrylonitrile rubber, butyl rubber, terpolymers of ethylene, propylene (EPM) and non-conjugated dienes (EPDM), butadiene rubbers, SBR, % and isoprene rubbers (See column 2, lines 39-48). In addition to the rubbers mentioned, the following elastomers may be used, individually or as a mixture: carboxyl rubbers, epoxide rubbers, trans-polypentenamer, halogenated butyl rubbers, rubbers of 2-chloro-butadiene, ethylene/vinyl acetate copolymers, epichlorohydrins, optionally also chemically modified natural rubber, such as, for example, epoxidized types (See column 2, lines 49-55).

As to claims 15, 22, in addition to the fillers, the rubber powders preferably comprise known processing or vulcanization auxiliary substances, such as zinc oxide, zinc stearate, stearic acid, polyalcohols, polyamines, resins, waxes, plasticizer oils, anti-aging agents against heat, light or oxygen and ozone, reinforcing resins, flameproofing agents, such as e. g. Al(OH).sub.3

and Mg(OH).sub.2, pigments, various crosslinking chemicals and accelerators and optionally sulfur in the concentrations conventional in rubber technology (See column 4, lines 6-17).

As to claim 17, 20, the solid which has precipitated is separated off by measures known per se (See column 4, lines 62-63). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used any known technique for separating solids including claimed mechanical isolation technique.

As to claim 19, the solid which has precipitated is separated off and dried (See column 4, lines 62-65). It is well known in the art that a powder should contain moisture as little as possible to provide free flowing powder. It is held that it is not inventive to discover the optimum or workable ranges of result-effective variables by routine experimentation. In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). See also In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have determined the optimum values of the relevant moisture content parameters (including those of claimed invention) in Smigerski et al through routine experimentation in the absence of showing of criticality.

10. Claims 1-17, 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smigerski et al (US 4,788,231).

Smigerski et al '231 are applied here for the same reasons as above for Smigerski et al '522. Smigerski et al '231 teach that pH can be adjusted in the range of 2.5 to 8.6 (See column 4, lines 33-34, 45-47).

11. Claims 1-17, 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goerl et al (US 20020091190).

Goerl et al are applied here for the same reasons as above for Smigerski et al '522.

Goerl et al teach that the process of the invention may be carried out either batchwise or else continuously (See P47). The use a series of reactors would be obvious for the reasons discussed below in paragraph 9.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is 571-272-1429. The examiner can normally be reached on Monday-Thursday, 9:00AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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May 31, 2007